MICHIGAN Department of Education

News Release

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FOUR MICHIGAN SCHOOLS RECEIVE THE 2015 EXCELLENCE IN PRACTICE AWARDS

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LANSING – Four Michigan schools have received the prestigious Excellence in Practice Awards from the Michigan Department of Education, recognizing exemplary practices in preparing Michigan's students for careers and higher education.

The awards recognize successful, exemplary state-approved Career and Technical Education (CTE) programs and career initiatives. These are programs that demonstrate outstanding outcomes, produce measurable results for students, and meet the challenge of high academic rigor.

"Career and Tech Education is helping our state and nation meet the very real and immediate challenges of student achievement, career and college readiness, and global competitiveness," said State Superintendent Mike Flanagan.

Early career preparation, including career exploration, career assessments, and comprehensive guidance and counseling, provides opportunities for students to begin thinking about the world of work.

"Through rigorous academic and technical preparation, relevant learning opportunities, and the supportive relationships of educators and families, students are better positioned to steer toward college and careers," Flanagan said.

The following awards were presented:

2015 Excellence in Practice Award for Career and Technical Education Program

Bay Arenac Intermediate School District Career Center
Engineering/Drafting

The Bay Arenac Intermediate School District Career Center's Engineering/Drafting program has a tradition of innovation and creativity that has led to post-secondary success for its students.

Through project-based learning and business and industry partnerships, students are immersed in the basics of technical drawing through use of specific software applications such as AutoCAD, Autodesk Inventor and Google SketchUp, as they work on group projects, experience hands-on applications and interact with professional demonstrations.

Additionally, students have the opportunity to utilize the program's 3-D printer, which is an essential tool in many of the community projects in which the program has been involved. This STEM-based program enables students to develop these much desired and sought after competencies that are crucial skillsets in the global workforce.

The curriculum for this program is aligned with Michigan's state standards, and as a STEM program, meets the employment needs for high skill, high wage, high demand jobs. This program also has focused on the recruitment and retention of special populations students, with a particular focus on students in programs that are non-traditional for their gender.

The SEEDS program (Students Exploring Engineering Dreams), was a collaborative effort with GM Power Train, exposing 8th grade girls to the field of engineering. The Career Center developed a manufacturing camp entitled "Camp Enginuity," with a focus on Engineering. The camp was so successful that a second camp was developed. Another exemplary feature is the program encourages collaboration between disciplines, promoting teamwork and essential "tech tool" imperative in the global workforce. Working together with business and industry, colleges and universities, and other CTE programs, students receive a well-rounded understanding of what it takes to work collaboratively toward a solution to a real world issue.

2015 Excellence in Practice Award for Career and College Readiness Initiatives:

Muskegon Area Career Tech Center
Building Pipeline to College: Infusing Entrepreneurship into Career and Technical Education

The partnership between Muskegon Community College (MCC) and the Muskegon Area Career Tech Center (MACTC) is an innovative example of secondary, postsecondary, and industry/entrepreneurship education collaboration.

Seventy-seven CTE students in the Business Careers, Health Science Academy, Environmental and Veterinary Science, and Internet, Network, and Security Technologies programs were given 21st century career options by providing entrepreneurship opportunities in their industry of choice. Thirty-nine CTE students also received Direct College Credit for BUS 131 Entrepreneurship with Muskegon Community College.

CTE students met once a week with an MCC instructor, assisted by the Business Careers and Health Science Academy instructors, at the Muskegon Area Career Tech Center to learn valuable problem-solving, financing, marketing, production, and most importantly, soft skills.

At the completion of the year-long college course, CTE students showcased over 20 businesses at the Muskegon Area Career Tech Center Trade Show, which was attended by staff, students, advisory board and community members, as well as local entrepreneurs from Muskegon County. Additionally, nine student-owned businesses competed at the Generation E Showcase in Battle Creek, where several student businesses received recognition from local entrepreneurial judges, as well as cash scholarships. In October 2014, the MCC/MACTC partnership was highlighted at the National Association for Community Colleges Entrepreneurship in Phoenix, Arizona.

Traverse Bay Area Intermediate School District Career Tech-Center
Manufacturing Technology Academy

What happens when an intermediate school district and a local community college listen carefully to their area manufacturers and business owners who are seeking a rigorous and relevant career and technical education program that will better prepare high school students for post-secondary training and/or careers and professions related to engineering and manufacturing? They take action and collaboratively create a unique two-year program, offered to 11th and 12th grade students in the Traverse Bay Area Intermediate School District – the Manufacturing Technology Academy (MTA).

MTA runs its program for four hours rather than two, during which rigorous academic and real-world technical coursework are the focus. The instructors of MTA work with engineers, college professors, managers, and technicians to find meaningful applications of their academic subjects for the classroom. The MTA curriculum meets or exceeds the state standards and are aligned to the Common Core State Standards, and most classes are honors or college-level.

In addition, MTA has collaborated with Northwestern Michigan College (NMC) to offer College Calculus I and II, followed by Calculus III, Differential Equations, and Fundamentals of Light and Lasers for college or university credit. All academic and technical content is available on Moodle, an on-line course management system that allows the students to access it in a 24/7 fashion. Rigor, Respect, Relevance, Reality, and Robots capture the "essence" of the MTA experience for its students.

Wexford-Missaukee Career Technical Center
Girls in STEM

The Wexford-Missaukee Career Technical Center STEM Camp is an initiative that was designed to provide girls in grades 8-10 with opportunities to explore STEM activities through a series of specialty camps.

Eighth grade girls with a strong aptitude and interest in science and math are invited to participate in STEM Camp I. During this three-day camp, students use their STEM skill set to design and manufacture SeaPerch, an underwater ROV (remotely operated vehicle). SeaPerch is a nationally-recognized STEM curriculum developed by a MIT professor and meets the National Science Standards. Students learn engineering concepts of frame design,

buoyancy, electrical principles, and quality control during the construction of the ROV. On the last day of camp, students launched their ROV at a community pool with family and friends in attendance.

This camp is housed at a local manufacturing facility, which provides the girls a unique insight into STEM-related careers within manufacturing. Building upon this excitement of the first camp, these young women are invited back for STEM Camp II to further enhance their academic, leadership, and career readiness skills to create a fully functioning wind turbine in its "Fab Lab" setting including blade design, machining principles, precision measurement, welding, and generator principles.

Both STEM camps provide science, technology, engineering and math curriculum for girls in grades 8-10 to encourage them to consider enrolling in a nontraditional CTE program, as well as a career in STEM-related field. Through these hands-on, challenging camps, these young women develop and/or enhance their academic, career, and college readiness skills such as: designing a product, engineering, welding, machining, electrical wiring, problem solving, and critical thinking.

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